

the airspeed indicator **58** and altimeter **66**, respectively. The indicators **62**, **70** may also be embodied in other manners, such as using various symbols positioned on a graphical display, or graphical differentiators such as color, shading pattern, etc. that differentiate available operating values from non-available operating values. The symbols may be strategically located to correspond to a given value or range on a graphical display. Indicators may also be provided as numerical values, such as specific values indicative of maximum or minimum limits and percentage values indicative of a reduction in capability. Indicators may also be provided as text, with words like “limit”, “maximum”, or “minimum” positioned on a graphical display to correspond to the limitation parameter. Combinations of symbols, numerical values, graphical differentiators and text may also be used. In some embodiments, an existing graphical display is shaded in a particular manner to indicate a specific range of available operating conditions for a given aircraft or system parameter. Other embodiments may also apply.

[0068] In some embodiments, the indicator **62**, **70** may be selected from a set of possible symbols or graphical presentations as a function of the performance limitation. For example, a performance limitation that reduces an original capability by a small margin, such as 5% or 10%, may correspond to a first set of symbols. A performance limitation that reduces an original capability by a medium margin, such as 20% or 25%, may correspond to a second set of symbols. A performance limitation that reduces an original capability by a large margin, such as 50% or more, may correspond to a third set of symbols. The thresholds used to classify the performance limitation and/or the number of categories associated with different symbols may vary and be set by a manufacturer of the system **34**, an operator of the aircraft **10**, and/or the flight crew. Within each category of performance limitation, there may be more than one available symbol. Symbols of a same category may have a common color, a common format, a common size, and the like.

[0069] In some embodiments, the indicator **62**, **70** may be selected from a set of possible symbols or graphical presentations as a function of the aircraft or system parameter to which the limitation parameter applies. For example, there may be a specific color, size, format, and the like for classes or groups of aircraft or system parameters. Classes or groups may be defined as desired. For example engine parameters may be grouped together in a single group, or using a plurality of sub-groups. Within each class or group of aircraft or system parameter, there may be more than one available symbol. Symbols of a same class or group may have a common color, a common format, a common size, and the like. The groupings/classes may be defined by a manufacturer of the system **34**, an operator of the aircraft **10**, and/or the flight crew.

[0070] In some embodiments, the indicator corresponds to an available range for a given parameter in accordance with a given performance limitation, as illustrated in the example of FIG. 6. Gauge **72** presents a compound thrust parameter in percent based on an engine manufacturer defined maximum thrust, that corresponds to 100%. A current reading **74** indicates 97%. Marker **76** indicates the maximum thrust, i.e. 100%. Pointer **78** is a reference bug which may be preset by the pilot to indicate appropriate thrust for the current conditions. Performance limitation indicator **80** is used to display to the pilot an available range of operating states for the

high pressure engine spool as a result of an in-flight aircraft reconfiguration. Note that indicator **80** differs from marker **76** which is always present and identifies original or standard operating limits of the aircraft. Indicator **80** also differs from pointer **78** which is movable and may be set as desired by the flight crew. In contrast, indicator **80** corresponds to a limitation parameter generated as a result of an in-flight reconfiguration of the aircraft **10**. Indicator **80** is displayed so as to be co-located with an aircraft or system parameter to which a limitation parameter applies, the limitation parameter having been generated as a result of the reconfiguration. Indicator **80** thus differs from traditional graphic presentations, such as markers, reference bugs, and the like, provided on display devices **14** of aircraft **10**.

[0071] In some embodiments, the indicator of the performance limitation is only displayed upon receipt of a request to display the performance limitation parameter. The request may be provided by a member of the flight crew via one or more of the data input devices illustrated in FIG. 1. The request may also be formulated with a checklist, for example as an item in the checklist that is either accepted or rejected by the pilot as he or she goes through the checklist. Other methods of receiving a display request may also be used.

[0072] The above description is meant to be exemplary only, and one skilled in the relevant arts will recognize that changes may be made to the embodiments described without departing from the scope of the invention disclosed. For example, the blocks and/or operations in the flowcharts and drawings described herein are for purposes of example only. There may be many variations to these blocks and/or operations without departing from the teachings of the present disclosure. For instance, the blocks may be performed in a differing order, or blocks may be added, deleted, or modified. While illustrated in the block diagrams as groups of discrete components communicating with each other via distinct data signal connections, it will be understood by those skilled in the art that the present embodiments are provided by a combination of hardware and software components, with some components being implemented by a given function or operation of a hardware or software system, and many of the data paths illustrated being implemented by data communication within a computer application or operating system. The structure illustrated is thus provided for efficiency of teaching the present embodiment. The present disclosure may be embodied in other specific forms without departing from the subject matter of the claims. Also, one skilled in the relevant arts will appreciate that while the systems, methods and computer readable mediums disclosed and shown herein may comprise a specific number of elements/components, the systems, methods and computer readable mediums may be modified to include additional or fewer of such elements/components. The present disclosure is also intended to cover and embrace all suitable changes in technology. Modifications which fall within the scope of the present invention will be apparent to those skilled in the art, in light of a review of this disclosure, and such modifications are intended to fall within the appended claims.

1. A method comprising:

acquiring reconfiguration information of an aircraft upon detection of a non-normal event in-flight, the reconfiguration information comprising at least one performance limitation of at least one aircraft or system parameter as a result of the non-normal event; and